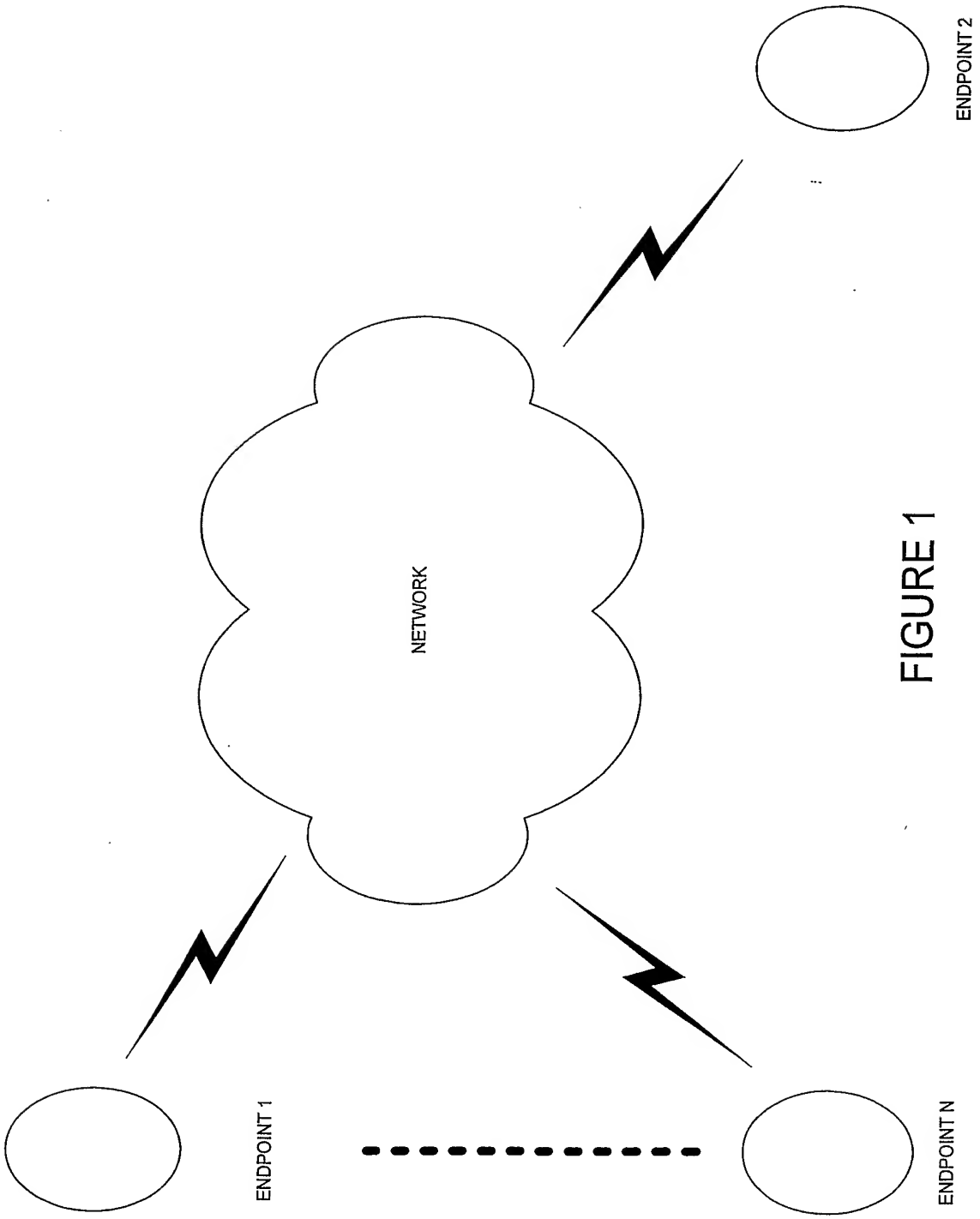

FIGURE 1

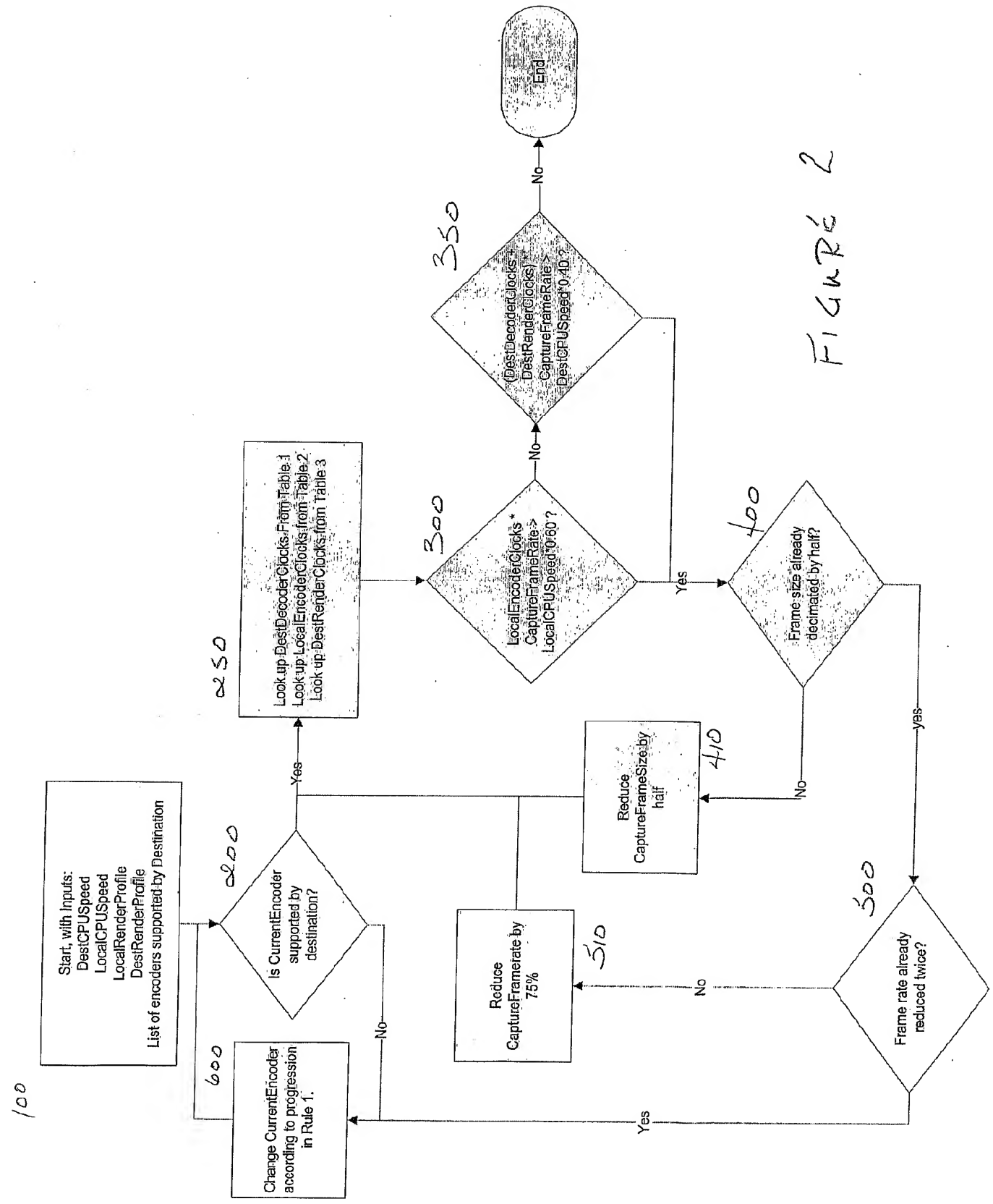
100
Start, with Inputs:
DestCPUSpeed
LocalCPUSpeed
LocalRenderProfile
DestRenderProfile
List of encoders supported by Destination
200
Is CurrentEncoder supported by destination?
Yes
No
250
Look up DestDecoderClocks from Table 1
Look up LocalEncoderClocks from Table 2
Look up DestRenderClocks from Table 3
300
LocalEncoderClocks * CaptureFrameRate > LocalCPUSpeed*0.60 ?
No
Yes
350
(DestDecoderClocks + DestRenderClocks) * CaptureFrameRate > DestCPUSpeed*0.40 ?
No
End
400
Frame size already decimated by half?
No
Yes
410
Reduce CaptureFrameSize by half
500
Frame rate already reduced twice?
No
Yes
510
Reduce CaptureFramerate by 75%
600
Change CurrentEncoder according to progression in Rule 1.

FIGURE 2

Table 1: Codec Progression

1. H264 Main Profile, CABAC on
2. H264 Main Profile, CABAC off
3. H264 Baseline Profile
4. MPEG4 Advanced Simple Profile, Half-pel
5. H263+, Annex N, Annex O
6. H263 Baseline

Table 2: Destination Decoder Table

Codec and Profile	640x480	320x240	160x120
H264 Main Profile, CABAC On	15.00	4.80	1.65
H264 Main Profile, CABAC Off	12.50	4.20	1.05
H264 Baseline Profile	11.25	3.90	1.05
MPEG4 Advanced Simple Profile, Half-pel	11.85	5.25	3.30
H263+, Annex N, Annex O	5.55	1.80	0.60
H263 Baseline	5.55	1.80	0.60

Table 3: Local Encoder Table

Codec and Profile	640x480	320x240	160x120
H264 Main Profile, CABAC On	69.15	18.00	4.95
H264 Main Profile, CABAC Off	66.15	16.40	4.35
H264 Baseline Profile	39.45	9.75	2.55
MPEG4 Advanced Simple Profile, Half-pel	32.55	9.90	3.00
H263+, Annex N, Annex O	50.85	11.40	2.40
H263 Baseline	50.85	11.40	2.40

Table 4: Destination Rendering Table

Codec and Profile	640x480	320x240	160x120
Hardware YUV Overlay Present	16.00	4.00	1.00
Overlay not Present	128.00	32.00	8.00

FIGURE 3

FIGURE 4

Tier 1 – Mid to High Level Machines
Highest Quality Video Settings for Machines > 800 MHz

Video Bitrate (kbps)	176
PB Frames Mode	IPP
Keyframe Frequency	20
Adaptive Framerate	Off
Encode Resolution	160 x120
Frame Rate	24
Image IQ Scaling	4x mode
Playback Resolution	320 x 240

Tier 2 – Mid-Level Machines – High Quality Video – (occasional dropped frames)
Settings for Machines 500 to 800 MHz.

Video Bitrate (kbps)	176
PB Frames Mode	IPP
Keyframe Frequency	20
Adaptive Framerate*	*On*
Encode Resolution	160 x120
Frame Rate	24
Image IQ Scaling	4x Mode
Playback Resolution	320 x 240

Tier 3 – Value Machines – Good Quality Video – (lower frame rate)
Settings for machines (300 to 500 MHz)

Video Bitrate (kbps)	176
PB Frames Mode	IPP
Keyframe Frequency	20
Adaptive Framerate	On
Encode Resolution	160 x120
Frame Rate*	15
Image IQ Scaling*	1x Mode (off)
Playback Resolution	160 x 120

Tier 4 – Sub-Par Machines – Best Effort Video Quality – (frames may be dropped often)
Settings for machines (300 MHz and less)

Video Bitrate (kbps)	176
PB Frames Mode	IPP
Keyframe Frequency	20
Adaptive Framerate	On
Encode Resolution	160 x120
Frame Rate*	10
Image IQ Scaling*	1x Mode (off)
Playback Resolution	160 x 120